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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,632	10/09/2003	John Kracik	49964/RVW/V186	1246

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EXAMINER	
BOMAR, THOMAS S	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/682,632	KRACIK ET AL.	
	Examiner	Art Unit	
	Shane Bomar	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20 and 21* is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☒ Claim(s) *13-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 5-9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6,742,596 to Haugen in view of US patent 4,592,125 to Skene.

Regarding claims 1 and 7, Haugen teaches a make-up control system for creating a threaded connection between a first tubular 130 and a second tubular 210 (see Fig. 1B) comprising: a top drive 200 connected to the first tubular; a controller 900 operably connected to the top drive that sends at least one command signal to the top drive, the top drive generating a torque and a rotational speed in response to the at least one command signal, the torque and rotational speed being applied to the first tubular during a make-up process between the first and second tubulars, wherein the top drive generates a torque and turn feedback signal that is

transmitted to the controller, and wherein the controller monitors the feedback signal to determine the torque and number of turns that are applied to the first tubular during the make-up process, and wherein the controller halts the make-up process when one of either a predetermined torque or turn limit is reached (see col. 5, line 1 through col. 6, line 39 and col. 7, lines 47-57). Also taught is a method of using the top drive of the system just described (see the aforementioned text as well as claims 23-27). However, it is not expressly taught that the top drive generates at least torque, turn, and speed feedback signals that are transmitted to the controller, wherein the controller monitors the feedback signals to determine the torque, turn, and speed of rotation during the make-up process so that the controller can limit the torque and speed of rotation of the top drive.

Skene teaches a system and method for making-up threaded joints similar to that of Haugen, with the exception of a top drive. Skene further teaches that at least a controller monitors torque, turn, and speed feedback signals so that the controller can limit the torque and speed of rotation of the top drive (see claims 1, 8, 9, 12, and 15). It would have been obvious to one of ordinary skill in the art, having the teachings of Haugen and Skene before him at the time the invention was made, to modify the system and method taught by Haugen to include the ability of Skene to monitor and control the torque, turn, and speed of rotation of the system, in order to obtain an indication of whether or not a good, leak proof joint connection can be made. One would have been motivated to make such a combination since Skene has shown it to be notoriously known in the art that monitoring and controlling of the torque, turn, and speed of rotation during the make-up process is a necessary improvement that ensures a good, leak proof connection, while providing the ability to terminate the process if a good connection cannot be

made before the make-up process is complete (see col. 1, lines 46-53, and col. 2, line 37 through col. 3, line 25).

Regarding claims 2 and 8, the combination applied to claims 1 and 7 above teaches that the top is an electric motor (see col. 8, lines 20-29 of Haugen).

Regarding claim 5, the combination applied to claim 1 above teaches that a motor controller controls a predetermined maximum allowable torque limit that nay be applied to the first tubular (see col. 2, line 46 through col. 3, line 18 of Skene).

Regarding claim 6, the combination applied to claim 1 above teaches that a turn encoder 250 monitors an amount of rotation of the first tubular during the make-up process and generates a turn feedback signal and transmits the turn feedback signal to the controller (see col. 5, lines 43-45 and col. 7, lines 20-23 of Haugen).

Regarding claim 9, the combination applied to claim 7 above teaches that controller 900 inherently controls a motor connected to the top drive (see claim 2 of Haugen).

Regarding claim 11, the combination applied to claim 7 above teaches that the method of claim 7 further comprises the step of obtaining torque versus turns data during the make-up process and analyzing the data to determine if the threaded connection between the first and second tubulars is a proper connection (see col. 2, line 46 through col. 3, line 18 of Skene).

Regarding claim 12, the combination applied to claim 7 above teaches that the method of claim 7 further comprises a thread matching phase, which comprises the step of aligning a threaded portion of the first tubular for threading engagement with a threaded portion of the second tubular (see for example col. 7, lines 20-28 of Haugen).

4. Claims 3, 4, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haugen in view of Skene as applied to claims 1 and 7 above, and further in view of US patent 4,885,963 to Nishikawa.

The combination applied to claims 1 and 7 above teaches the system and method for creating a threaded connection with a top drive. However, it is not explicitly taught that a motor controller controls the rotational speed that the top drive imparts on the first tubular by controlling an amount of voltage that is applied to the top drive, or controls the torque that the top drive imparts on the first tubular by controlling an amount of current that is supplied to the top drive.

Nishikawa teaches a system and method for tightening pipe, or tubular threads. It is further taught that a motor controller controls the rotational speed that the top drive imparts on the first tubular by controlling an amount of voltage that is applied to the top drive, and controls the torque that the top drive imparts on the first tubular by controlling an amount of current that is supplied to the top drive (see col. 6, lines 15-59, especially lines 26-31). It would have been obvious to one of ordinary skill in the art, having the teachings of the combination and Nishikawa before him at the time the invention was made, to modify the system and method taught by the combination to include the motor controller of Nishikawa, in order to prevent over-tightening or insufficient tightening of a pipe. One would have been motivated to make such a combination since Nishikawa has shown it to be notoriously known in the art to use a motor controller to control current and/or voltage when dealing with tubular objects so that a torque limit is not exceeded.

Response to Arguments

5. Applicant's arguments, see pages 8 and 9, filed September 22, 2005, with respect to the rejection(s) of claim(s) 1 and 7 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Skene.

Allowable Subject Matter

6. Claims 20 and 21 are allowed.

7. Claims 13-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bookshar et al, Kainec et al, McCombs et al, Ohmi et al, Sargent (appears to teach limitations of claims 1 and 7 except for a top drive), and Stone et al teach joint make-up systems of particular interest.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 6:30am to 4:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J. Bagnell
Supervisory Patent Examiner
Art Unit 3672

tsb
December 12, 2005